

~~QE747~~

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Vander FIELD NOTE Book

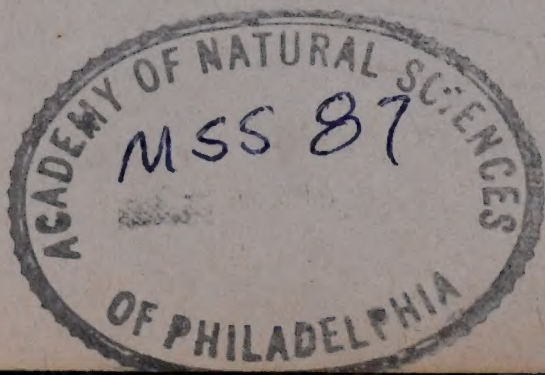
ACADEMY OF NATURAL  
SCIENCES OF PHILADELPHIA

EXPEDITION TO AGATE,  
NEBRASKA AND OTHER  
FOSSILIFEROUS AREAS

1938

Finder please return  
to

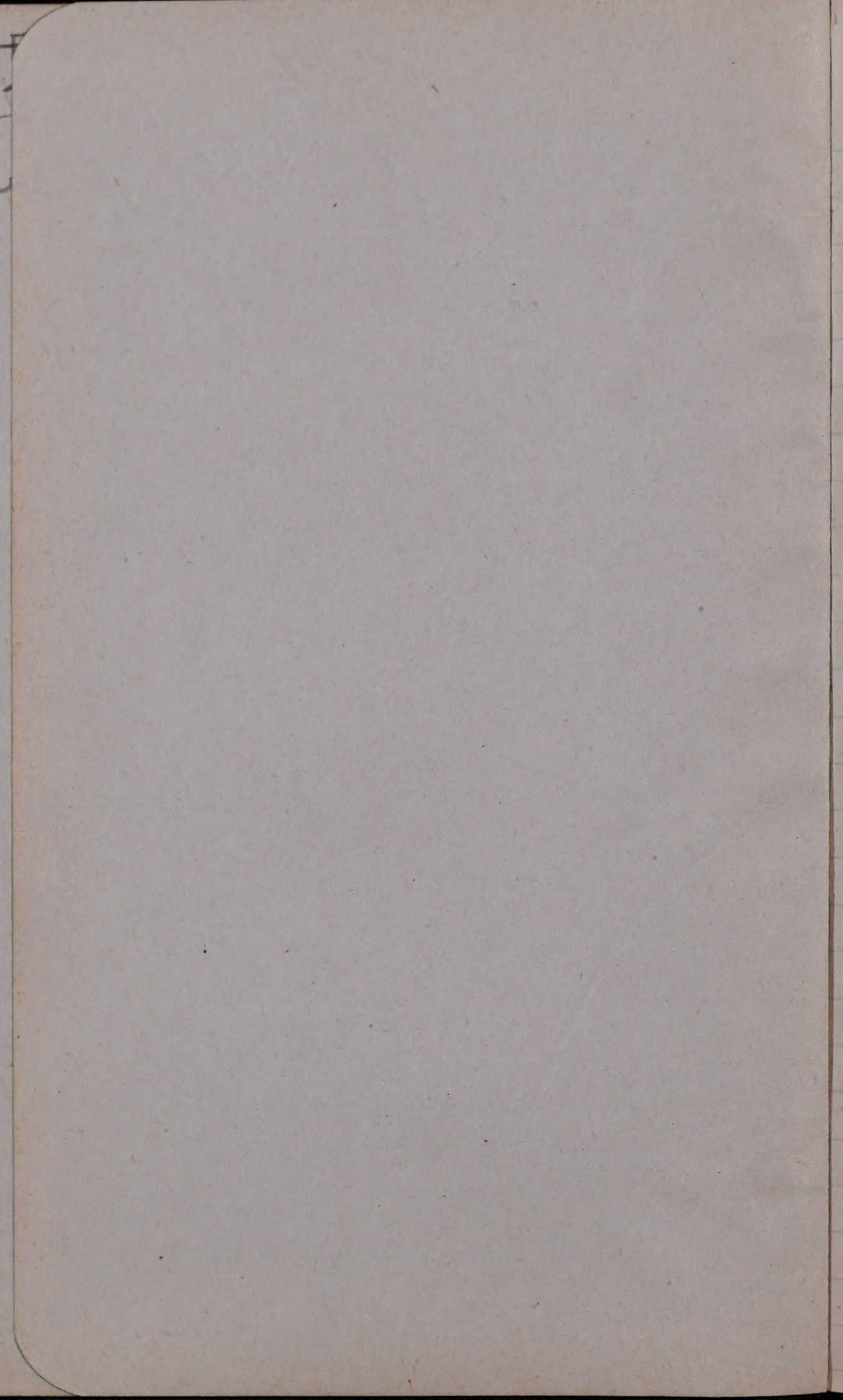
Edwin H. Colbert  
Academy of Natural  
Sciences  
Nineteenth and the  
Parkway  
Philadelphia, Pa.  
U. S. A.











# Field Note Book

Academy of Natural  
Sciences of Philadelphia

Expedition to Agate,  
Nebraska, and other  
fossiliferous areas,

1938.

Members of Expedition

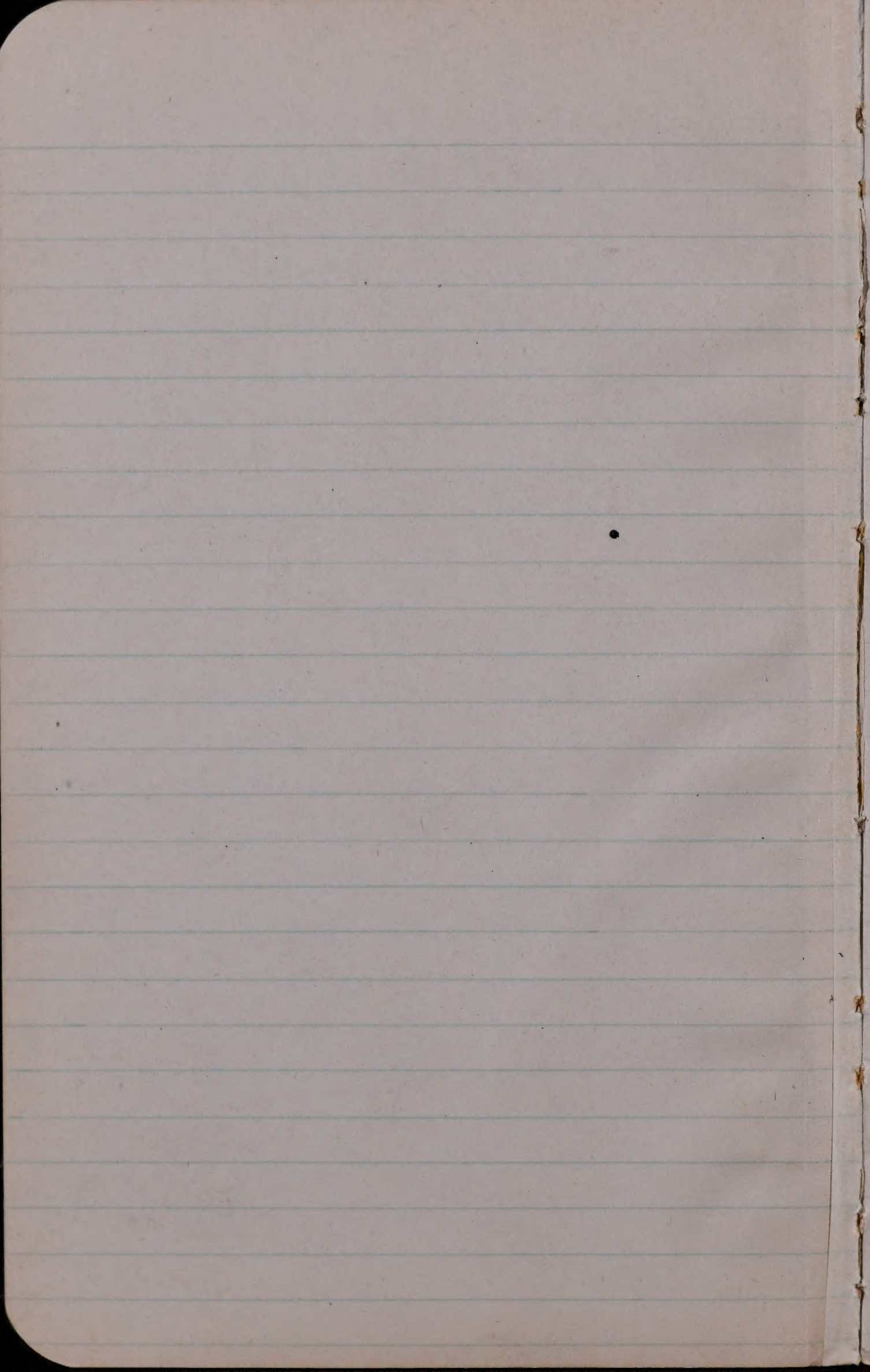
Edwin A. Colbert

Edgar B. Howard

Malcolm Lloyd, Jr.

Edward C. Page, Jr.







## Diary and Notes.

Wednesday, July 6, 1938.

Left New York on the  
"Manhattan Limited," Mr.

Lloyd and Edward Page  
boarded the train at  
Pavli, Pa.

Thursday, July 7,

Arrived in Chicago at  
12<sup>30</sup> P.M. Spent the afternoon  
at the Field Museum,  
where we saw Quinn and  
Dr. Mr. Riggs and  
Patterson went away.  
Boarded the Union  
Pacific "Stream Liner" at  
6<sup>20</sup> P.M.



Evening of July 8<sup>th</sup>  
visited the Scottsbluff  
National Monument Museum  
with Mr. Green of  
Scottsbluff. A very  
excellent small museum  
with a good Bone slab  
from Agate.

Also went to the  
top of the bluff.



Friday, July 8.

Arrived at North Platte  
Nebraska at 5<sup>08</sup> A.M.  
Boarded train for Cering  
at 6<sup>00</sup> A.M., arriving in  
Cering shortly after 11<sup>00</sup> A.M.

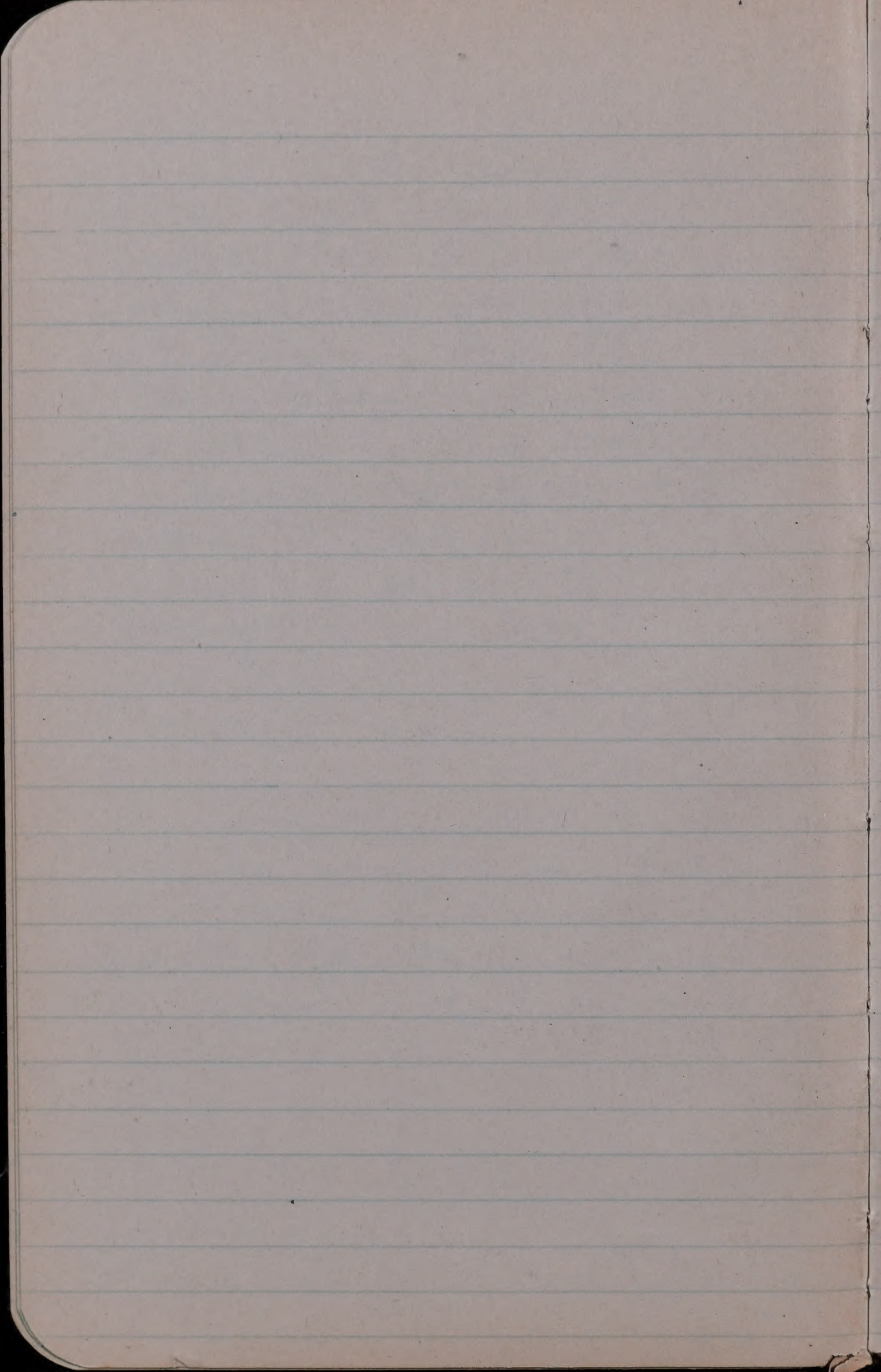
There met Dr. Howard,  
Also Mr. M<sup>c</sup> Caffee and  
Mr. Dollinger of Scottsbluff.  
Mr. M<sup>c</sup> Caffee is closely  
associated with Harold  
Cook - Mr. Dollinger is  
secretary of the Chamber of  
Commerce.

In the afternoon we  
went to Aztec in  
Dollinger's and Howard's car.  
Harold Cook met at home  
but we met Captain Cook.

Saturday, July 9.

Spent the day purchasing  
provisions and equipment.







(July 10)

Rented a Chevrolet "pick-up" truck. Hired a cook, John House, of Scottsbluff.

In the afternoon I went to Agate with Mr. M<sup>c</sup>Caffrey and two men Harold Cook. We made arrangements for work at the quarry.

Sunday, July 10

Went to Agate in the morning. Established camp in the afternoon. Also went to the quarry with Harold Cook and looked over the situation.

Monday, July 12.

Started work at the quarry. Mr. Lloyd and House returned to Scottsbluff.







Loyer. Harold took  
inspected our work in the  
morning and gave us some  
advice.

See Field Numbers 1-2.

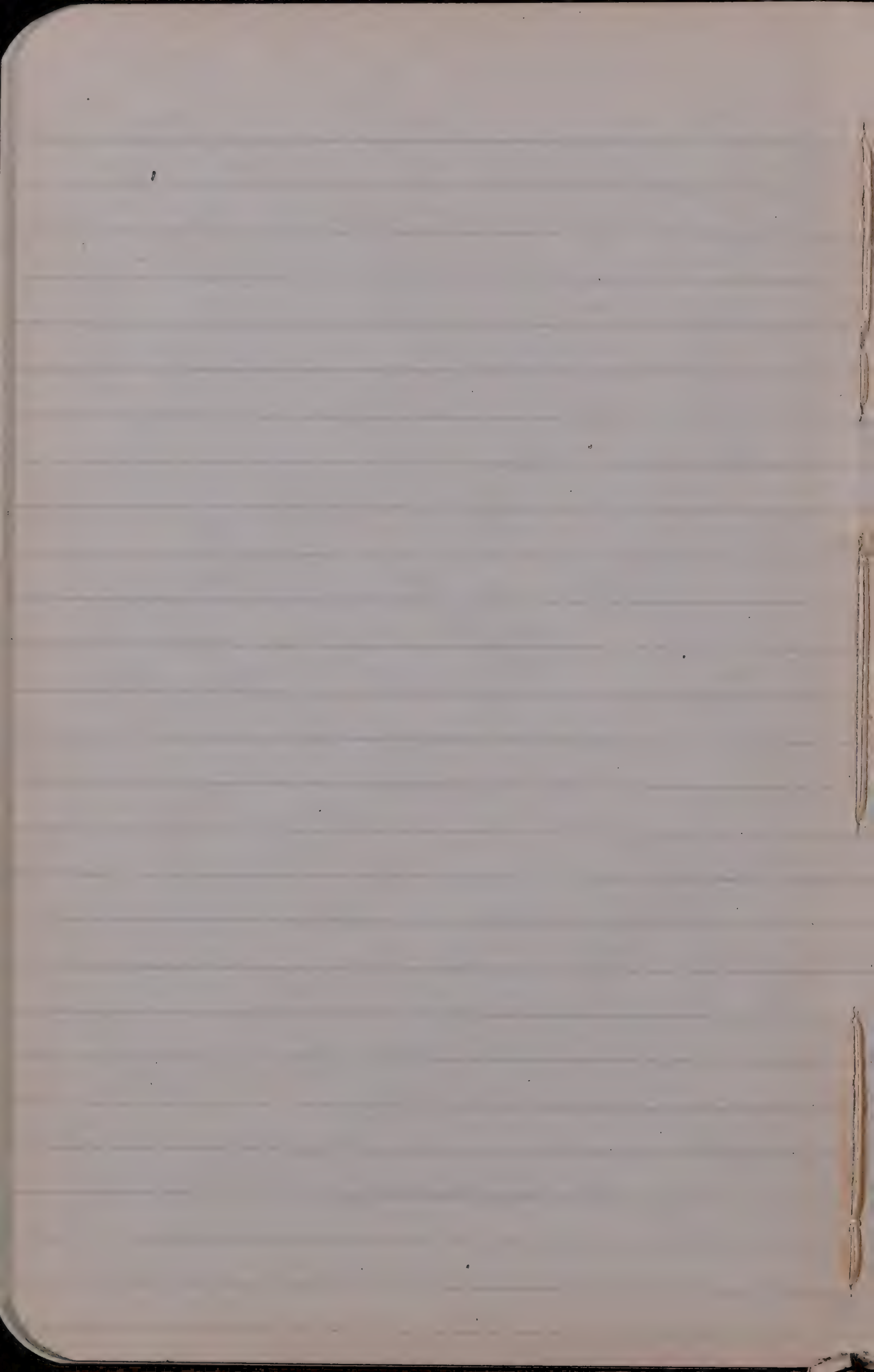
Friday, July 15

Work at quarry. Reached  
the Com Loyer in late  
afternoon, and uncovered a  
perfect radius-ulna of  
Moropus. Discovered by Mr.  
Lloyd.

Saturday, July 16.

Worked at quarry in  
morning. Uncovered more bones.  
Howard, Page, Lloyd & Howe  
went to ~~Swatara~~ Whiff in the  
afternoon, to get supplies, etc.  
I stayed in camp - conducted  
a C.C.C. going to the quarry,  
and then spent the day.







afternoon, evening and night  
at the ranch. A heavy  
rain in the afternoon and at  
night.

Sunday, July 17.

Spent most of the day  
at the ranch. Went to  
camp in the morning - and  
went to the quarry to see  
how the slab had gotten  
through the storm.  
Everything in good  
shape.

John came - Both John  
Scott & Bluff Saturday night  
and spent all day  
Sunday in camp.

The other three arrived  
at the ranch in the  
afternoon, from Scott & Bluff.  
Looking at the Carnegie  
in view north, we found







+ both the molars - which  
discovered on Friday and  
attributed to Microtus  
is actually Diphyus !!

Monday, July 18.

Worked all day in the  
quarry, exposing the  
uppermost bones. Among  
other things, found a  
Dicatherium skull,  
Microtus tooth and  
Synhyon (?) molar. This  
last with careful  
identification. Many  
limb bones and other  
valuable elements.

Tuesday, July 19

Quarry work all day.  
Exposing still more of the







upper level of the lower layer.

Wednesday, July 20

Worked in quarry exposing  
more of lower layer. Visitors  
in morning and afternoon,  
among them Mr. Green  
of Scottsbluff and his  
daughter, Lucetta.

They stayed for  
supper, after which Dr.  
Howard left with them  
for Scottsbluff. He and  
Mr. Green to spend  
two days together in the  
vicinity of Hornet Peak,  
inspecting some caves  
in which artifacts have  
been found.





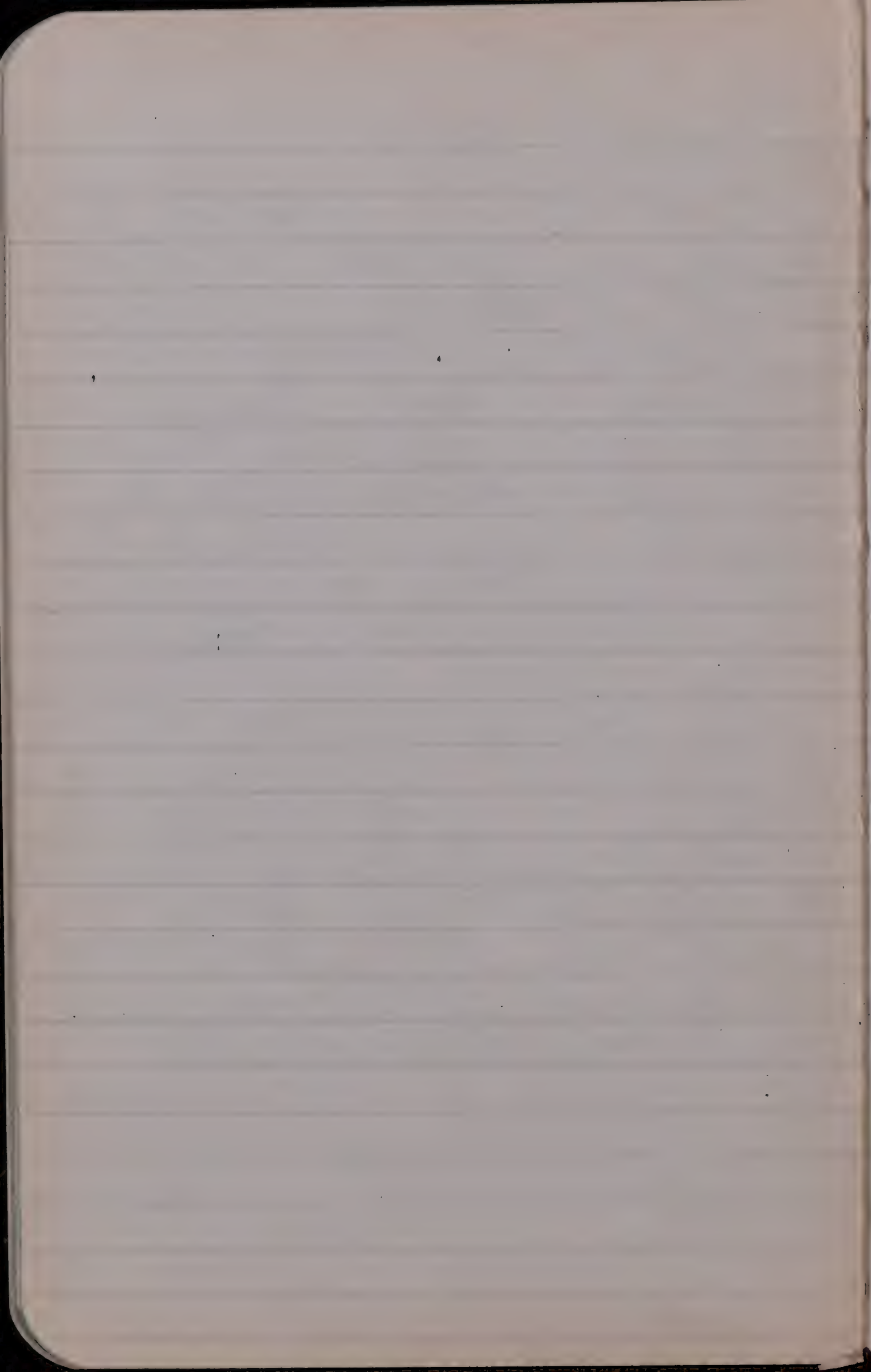
Thursday, July 21

Mr. Lloyd Page and I  
went to Cornsford where we  
~~met~~ Schultz and his  
party. Spent the day  
with Schultz, looking  
over the Algonquin section  
in northwestern Nebraska.  
Saw the remains of  
Coring, Mouse Creek and  
Horizon in the canyon  
near Fort Robinson.

Stopped at the ranch  
on the way back to camp  
and had a talk with  
Harold Cook as to  
best methods for  
continuing on a lab.  
A visit from the Cooks  
in the evening.

Friday July 22.

Worked all day in quarry.





Started from the around  
look and found a number  
of fossil specimens in the  
process - notably a lower  
part of Dicranophorium.

Saturday, July 23.

Quarry work in morning.  
University of Chicago crowd  
appeared late in the  
morning for a visit. -  
Olson and Paul Miller in  
the group. Had lunch  
together. To town in the  
afternoon for supplies.

Sunday - July 24

In camp all day, many  
visitors in the afternoon, to  
see the quarry. To the ranch in  
the evening for a visit with  
Grayson, Wade and Dratney  
and the "North Party" crowd.





Monday - July 25

Quarry - work on trench Mr.

Tuesday - July 26

Quarry - work on trench Mr.

Wednesday - July 27

Quarry - work on trench Mr.

~~Thursday - July 28~~

~~Took the day off and  
went to Clayville to  
see the rocks.~~

~~Friday~~

~~Stayed all night~~

Thursday - July 28

Quarry work all day -  
trench Mr.





Friday - July 29

Took the day off and  
went to Cherryvale to see  
the roller. Back to  
Torrington for the night.

Saturday - July 30.

Spent the morning  
at Torrington, looking  
at the Howard quarry.

Scottsbluff in the  
afternoon, shopping. Dinner  
with the Coons and  
back to town late.

Tolson waiting,  
telling of Perkins' arrival  
in Scottsbluff.

Sunday - July 31

Back to Scottsbluff  
to get Perkins while  
the others worked in the  
quarry.





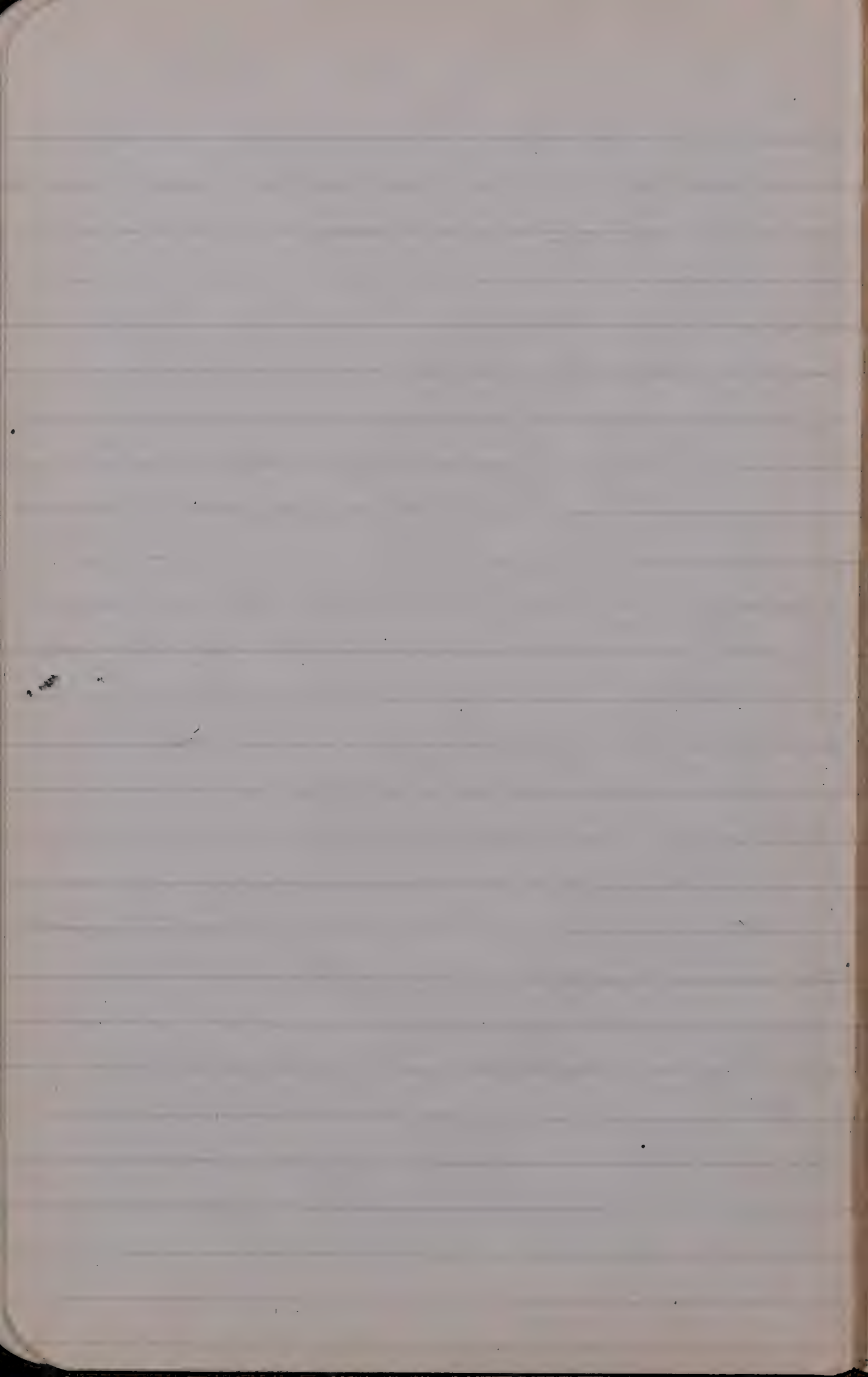
Monday - August 1

Heavy work all day.  
Trucker, Dr. Bohlen  
also worked on the hill,  
collecting some specimens.  
I left in afternoon, and  
spent the afternoon in  
camp.

Tuesday - August 2

Too windy to work in  
quarry. Went with Drs.  
Howard and Bohlen to look  
at the Stensbury's quarry  
in the morning. Prospected  
it but decided it probably  
would not be possible to  
work it this year.

In afternoon went to  
the Hat Creek basin  
to see the Oligocene.  
Found some typical badland  
much to Dr. Bohlen's great  
delight.





Wednesday - August 3.

Worked in quarry in morning - trenches. In afternoon drove to the town locality of the Sharp Creek - Snake Creek, and to the fine view of Howard Creek.

Said Mr. Trishlin good-bye and went to the quarry, where John & I had worked all afternoon.

Thursday - August 4

Worked in quarry in morning - trenches. We are getting near to the end of the trenching.

A high wind in the afternoon kept us back to further work.





Friday - August 5

Quarry work - trenches.

Saturday - August 6

Quarry work in morning - trenches. The others went into Scott's bluff in the afternoon, while I stayed and worked at the quarry. High winds made the work difficult.

John came back late with supplies. Dr. Howard and Ned Poze stayed in town overnight.

Sunday - August 7

Worked in quarry in morning. Dr. Howard and Poze arrived in the late morning.

John and I went to the ranch for lunch and the afternoon while the others continued the





quarry work. They joined us  
at our ranch for the evening  
meal, and an enjoyable  
evening with the Quakers.

Monday - August 8.

Quarry work. Completing  
trucks, and began underpinning.

Tuesday - August 9

Quarry. Trucks completed.  
Worked in underpinning and  
made fair progress.

Wednesday - August 10

Quarry. Underpinning -  
making holes for supporting  
timbers.

Thursday - August 11

Quarry. Underpinning  
and washing holes.





Friday - August 12.  
Plastered slab.

Saturday, August 13  
Spent the day in town,  
purchasing necessary supplies  
and the like!

Sunday, August 14  
Undercutting slab.

Monday, August 15.  
Undercutting slab.

Tuesday, August 16  
Undercutting slab.

Wednesday, August 17  
Undercutting slab  
Building cracks & plastering





Thursday, August 18  
~~Went to work~~  
Planting and fitting  
crops.

Friday, August 19.  
Removed slabs. This  
was a big job, and occupied  
our time from six in the  
morning until nearly nine  
at night. The work  
was carried out largely  
by two tractors, sent out  
by Mr. H.C. Smith, with  
our aid.

But after working hard  
all day we finally got  
the slab out on the  
truck with no damage.  
The tractors stayed all  
night at work, planning  
to drive in by daylight.





Saturday, August 20

The slab went in to  
Scottsbluff by truck, which  
we broke camp.

Dr. Howard and I went  
in, during the middle of  
the morning, and spent  
our time in town  
supervising the loading of  
the slab onto the freight  
car, paying bills and  
winding up our accounts.

The slab went into  
the car without accident.

Al and John came  
in after lunch with the  
truck, and unloaded the  
remainder of the freight.  
Then we turned the truck  
back to Scottsbluff.

Al and I just  
caught the afternoon train  
out of Cheyenne.

Dr. Howard stayed on  
for a day, after which he

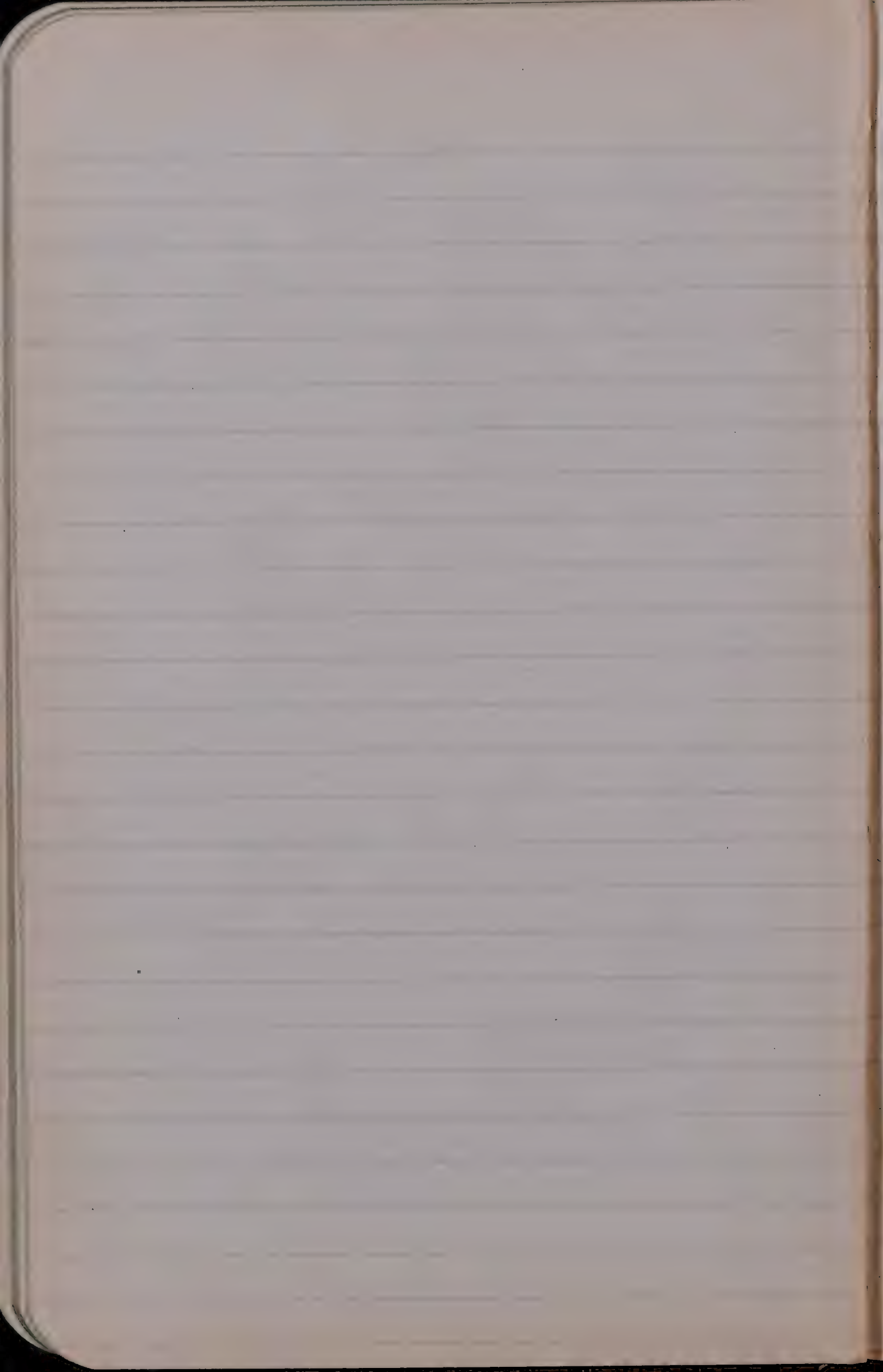


intend to drive west.

We settled our accounts  
with John Horn for his  
complete satisfaction.

Thus ended the trip -  
successfully.





Mammals seen on Trip

Mephitis mesomelas varians (Gray)  
Long tailed skunk

Canis nebracensis nebracensis Merriam  
Nebraska coyote

Perognathus flavescens flavescens (Merriam)  
Plains pocket mouse

Dipodomys  
Kangaroo rat (species?)

Peromyscus leucopus aridulus Osgood  
White-footed mouse

Neotoma floridana baileyi (Merriam)  
Pack rat

Erethizon epixanthum bruneri Swenk  
Nebraska yellow-haired porcupine

Lepus californicus melanotis (Mearns)  
Plains jack rabbit

(Sylvilagus floridanus similis Nelson)  
Nebraska cottontail

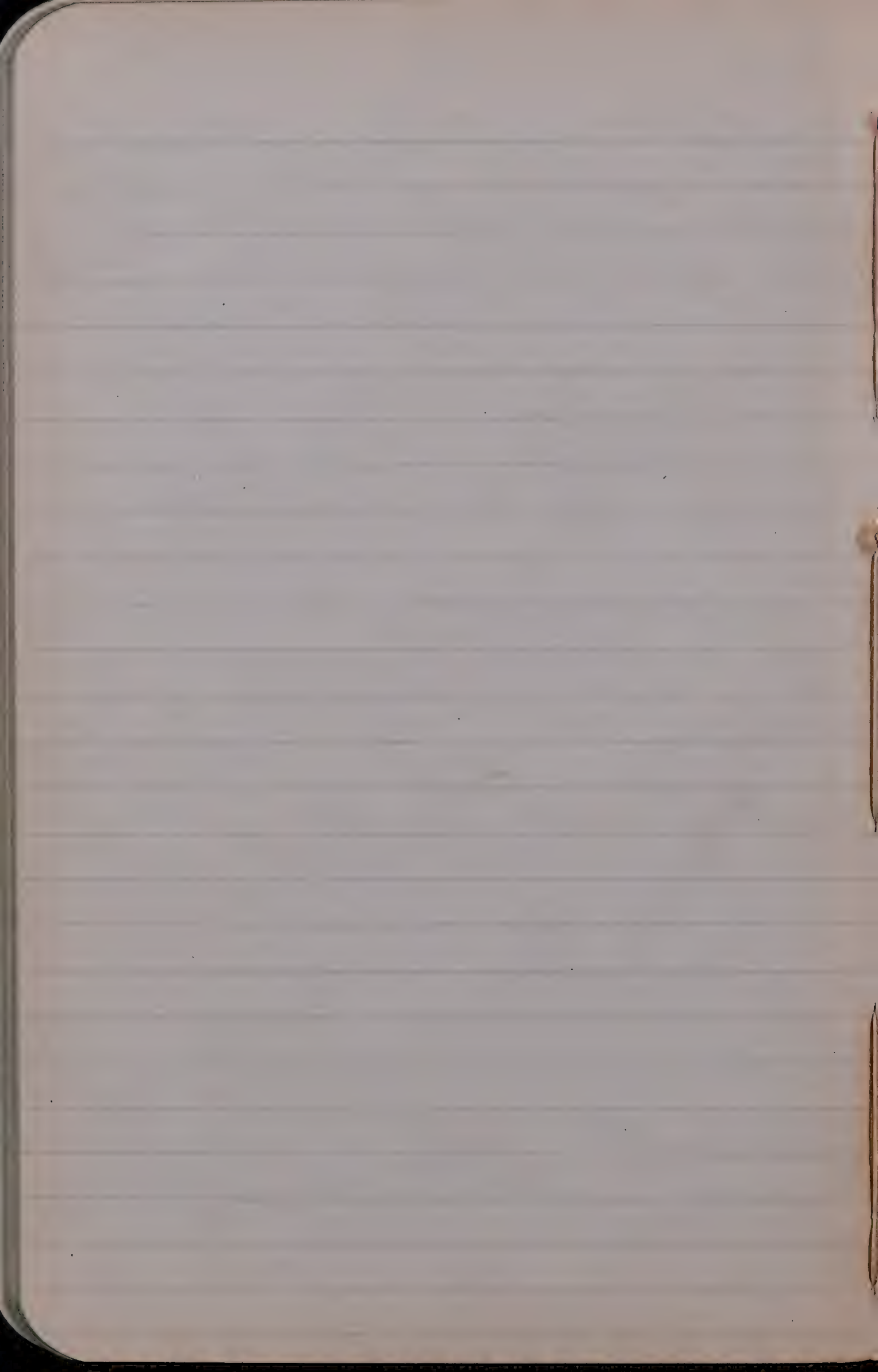
Sylvilagus auduboni baileyi (Merriam)  
Wyoming cottontail. { This species  
definitely present

Antilocapra americana americana (Ord)  
Pronghorn









1938

## FIELD NUMBERS

(1) Crocodilian tooth.

Lower Miocene; Horizon form,  
3'6" above top of bone-  
layer. Gate Quarry.

(2) Various fragments.

Horizon & Locality as in (1).  
About 1' above top of  
Bone - layer.

The following numbers are  
of specimens from the top most  
level of the Bone layer.  
It was necessary to remove  
many of them in order to  
work to the Bone layer  
itself. See map.

(3) Dinohyas - radiatus - ulna

(4) Bone fragment

(5) Diceratherium - astragalus





(6) Limb bone fragment

(7) Moropus - lower tooth

(8) Diceratherium (?) metapodial

(9) - Vertebra

(10) - Diceratherium (?) pelvis of  
immature animal.

(11) Diceratherium - femur

(12) Diceratherium - rib.

(13) Long ilium - (Moropus?)

(14) Broken ulna(?)

(15) Vertebra

(16) ~~Calcaneum~~ ulna

(17) Artiodactyl upper molar

A	F	M
B	G	N
C	H	O
D	I	P
E	J	Q
	K	R
	L	



(18) Monopod holotype

(19) first rib.

(20) Diceratherium - lower tusk

(21) Tooth fragment

(22)

(23) Jaw?

(24) Metapodial

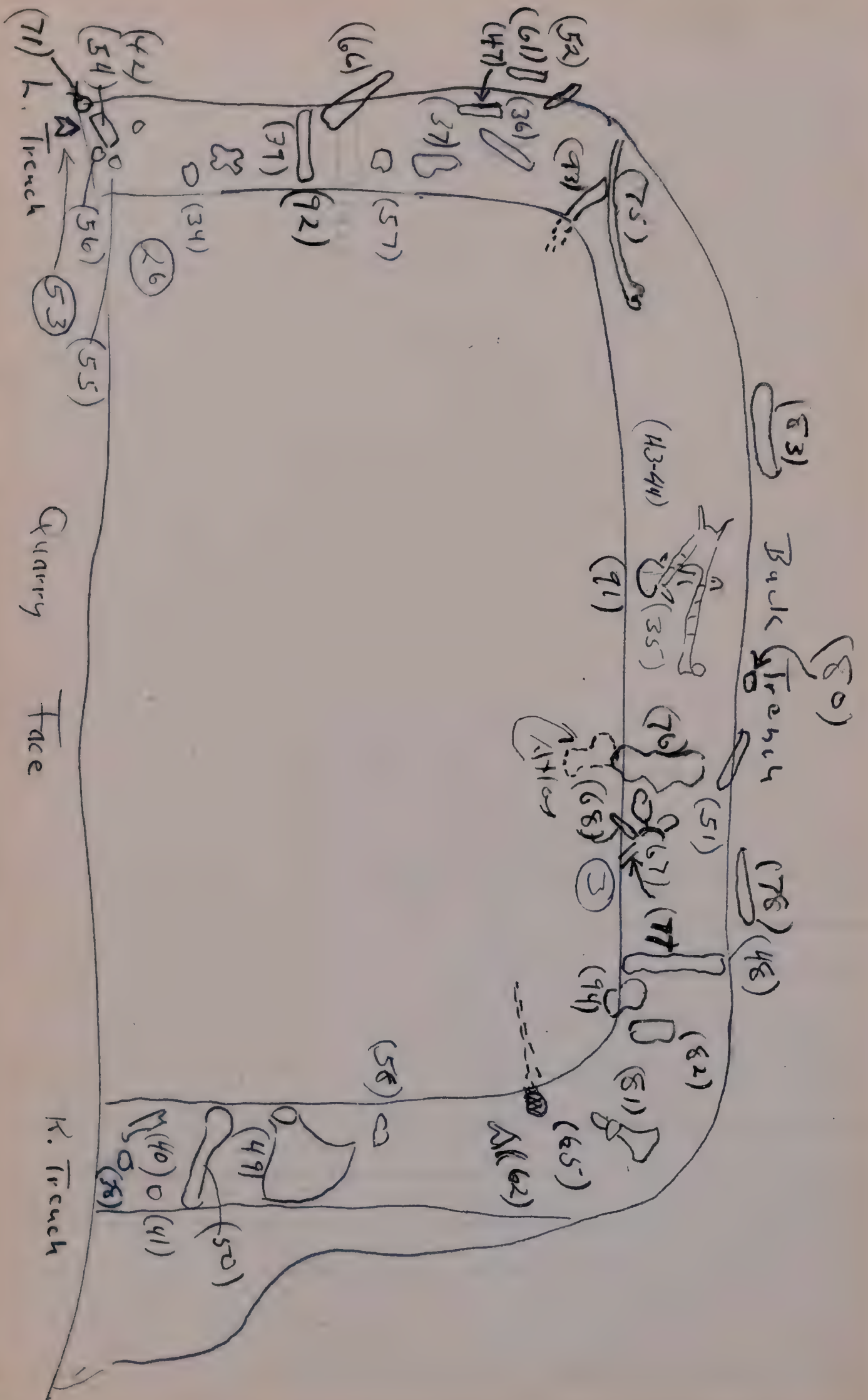
(25) Rib

(26) Diceratherium - skull

(27) Tibia

(28) Tooth fragment

(29) Miscellaneous fragments



(30) Diceratherium - upper molar

(31) Dinohyus - astragalus

(32) Limb Bone

(33) Diceratherium - upper molar

(34) Diceratherium - upper molar  
L. trench.

(35) Diceratherium - mandible.  
B. trench

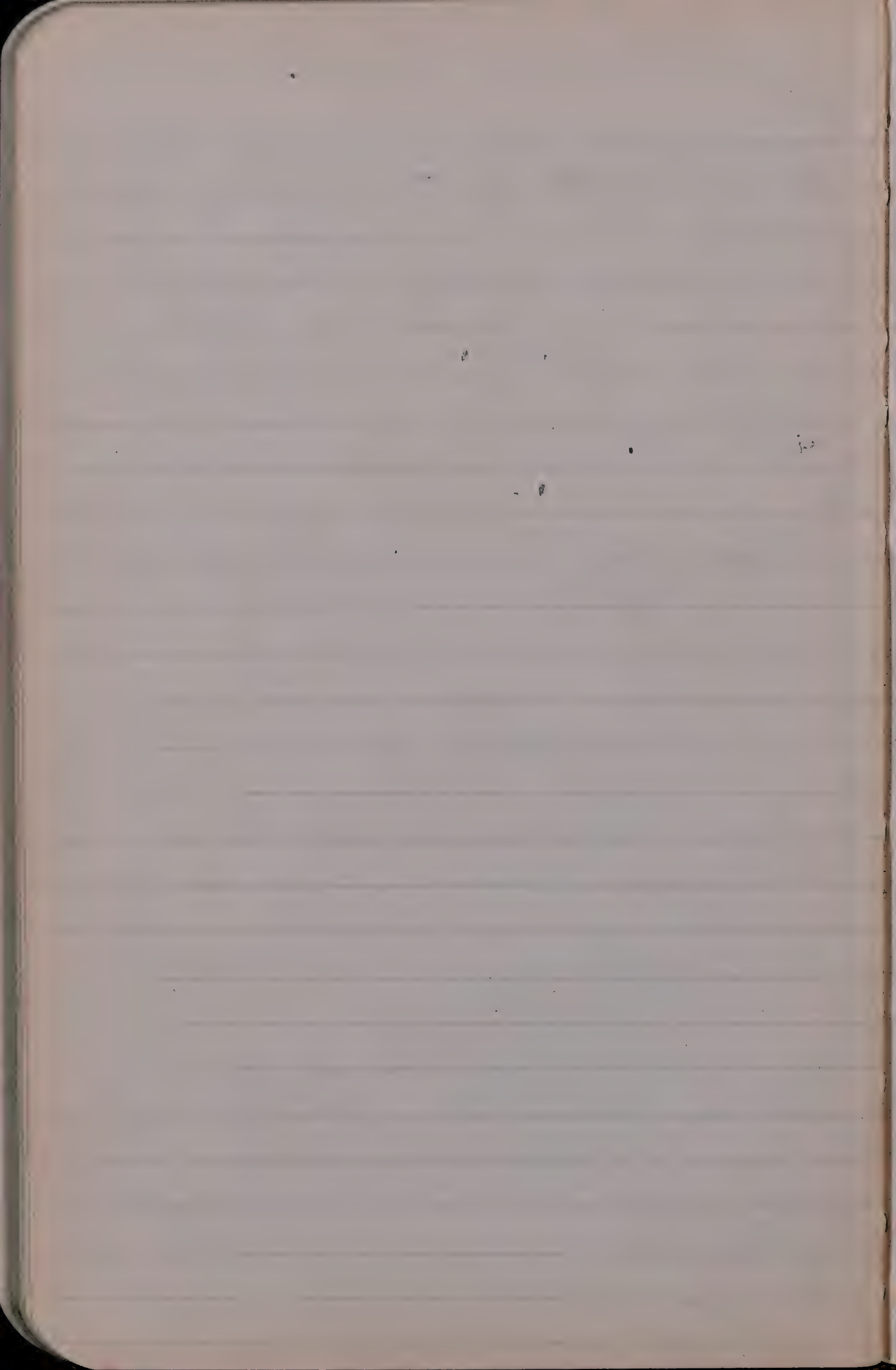
(36) Moropus - metatarsal  
L. trench

(37) Dinohyus - calcaneum  
L. trench

(38) Diceratherium - left upper pm.  
R. trench

(39) Dinohyus - astragalus  
L. trench





- (40) Moropus (?) - limb bone  
R. trench
- (41) Dicrathidium - upper molar  
R. trench
- (42) Dicrathidium - upper prem.  
L. trench
- (43) Moropus (?) molar, upper  
Back trench
- (44) Dicrathidium - upper molar  
Back trench
- (45) Two vertebrae -  
L. trench
- (46) Miscellaneous bones  
L, R, & Back trenches
- (47) Moropus (?) - metapodial  
L. trench





- (48) Dicrathidium - tibia  
Back trench, at distal  
end of Dinohyus radius-ulna.
- (49) Dicrathidium - pelvis  
R. trench
- (50) Dicrathidium - femur  
R. trench
- (51) Dicrathidium radius  
Back trench
- (52) Dicrathidium - metacarpal  
L. trench
- (53) Dinohyus - (over) premolar  
L. trench
- (54) Dicrathidium - frag. of mandible  
L. trench
- (55) two premolars  
L. trench



(56) Dicrantherium - upper 3rd molar  
L. trench.

(57) Monopus - milk molar (upper)  
L. trench

(58) Monopus - ectoloph 7 molar  
R. trench

(59) Dicrantherium - various teeth  
all trenches

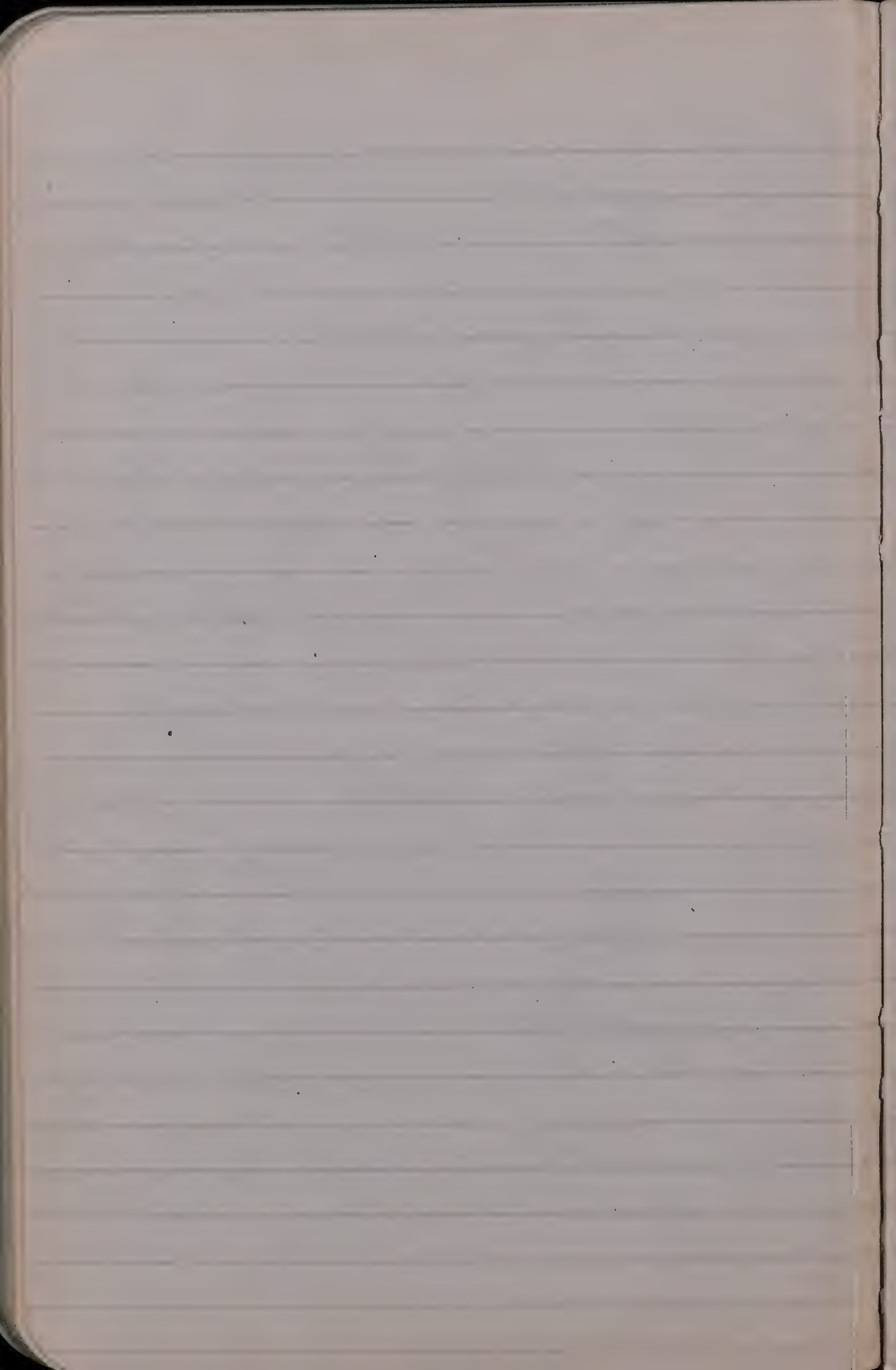
(60) Monopus - pholour.  
L. trench

(61) Monopus matured  
L. trench

(62) Dicrantherium 3rd molar  
R. trench

(63) Dicrantherium 1st molar  
L. trench





(64) Dicranium teeth  
various lengths,  
(includes minor)

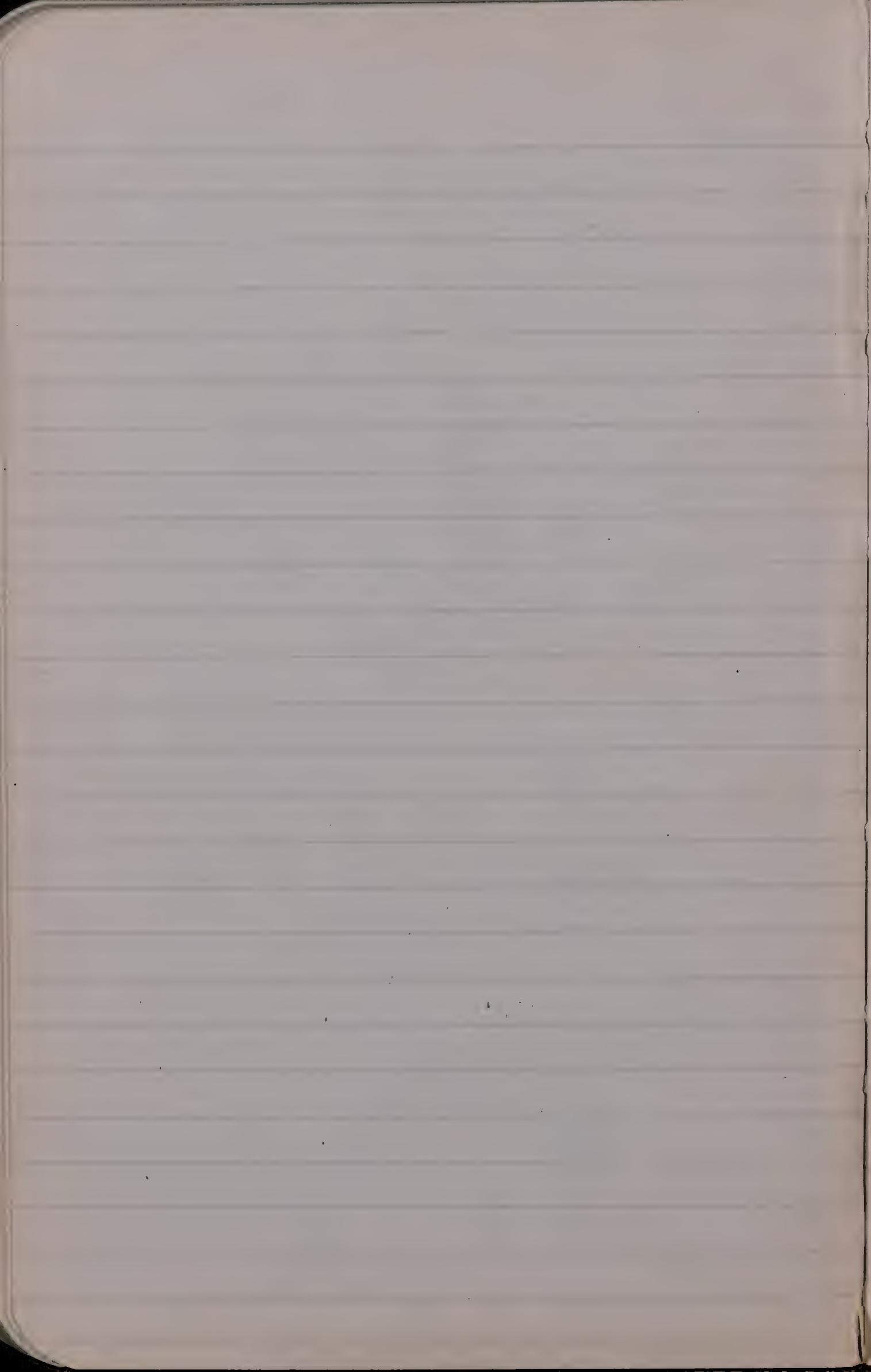
(65) Olecranon  
R. trench.

Two olecranon fits on  
the ulna protruding from  
the slot, as shown. To be  
fitted back when the  
slot is prepared.

(66) Dicranium lower  
L. trench - opposite (27)

(67) Dicranium - distal  
end of lower.  
Back trench

(68) Dicranium - lateral  
metapodial  
Back trench at distal  
end of ~~upper~~ Dicranium  
rod - ulna





(69) Dicrantherium - upper and  
lower cheek teeth.  
L. and R. tranches.

(70) Dicrantherium - in inner  
L. tranche.

(71) Monopos - pharyngeal.  
L. tranche

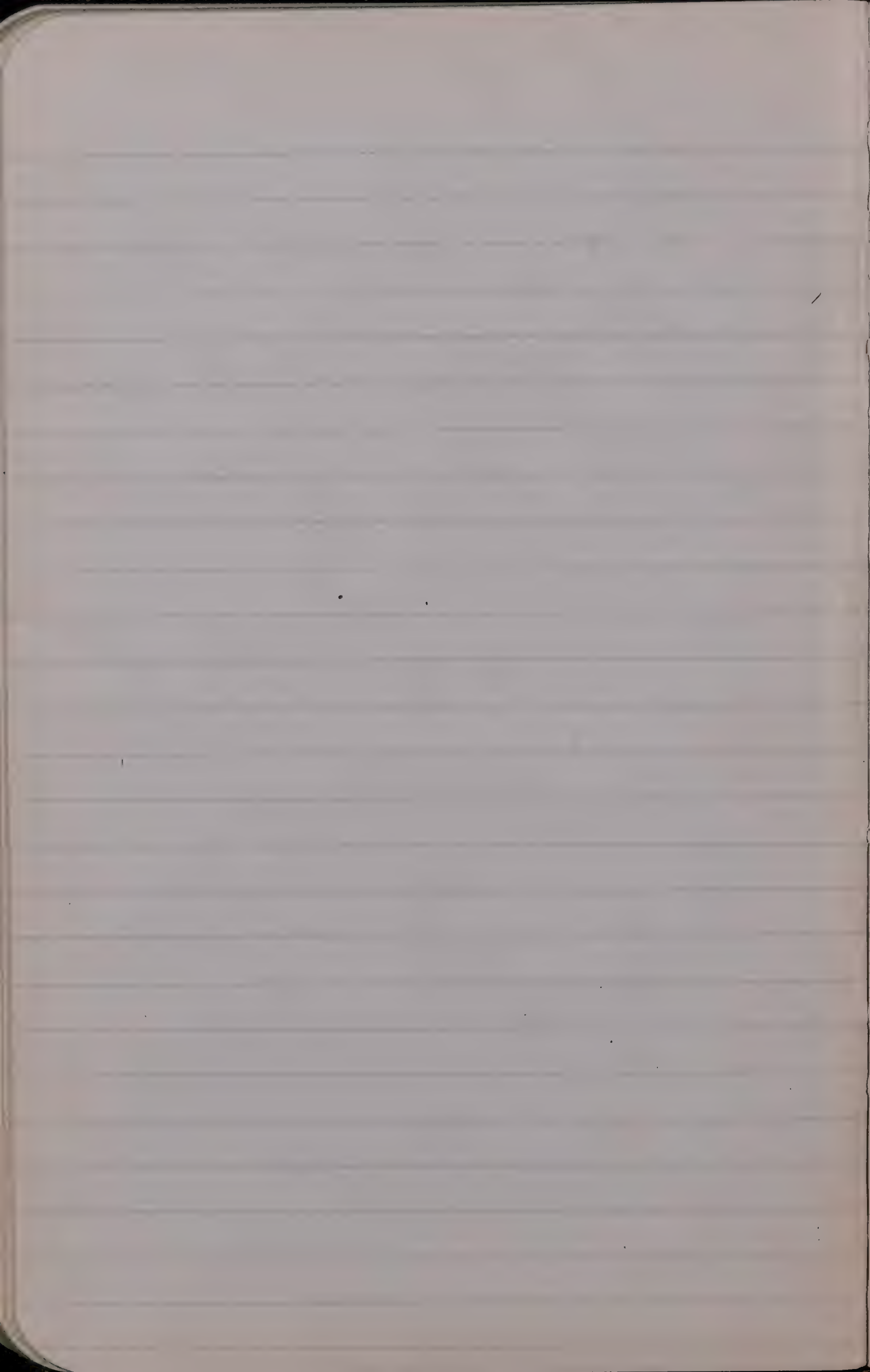
(72) Monopos - osteogaster  
Location unknown.

(73) Dicrantherium(?) or equid(?)  
Proximal end of lateral  
metapodial

(74) Monopos(?) - milk molar(?)  
L. tranche.

(75) Large rib.  
Back tranche

(76) Cervical vertebrae, in series.  
Then ended above the atlas  
at the distal end of Diplotherium leg.



(77) Diceratherium - ulua.  
Back trench. Set in  
fur at edge of slab. This  
row confirms under the  
middle of the Finch  
row - ulua.

(78) Diceratherium - rodent.  
Back trench.

(79) Diceratherium - (hull teeth)  
Back trench

(80) Dicrohyes - phalange  
Back trench

(81) Diceratherium - pelvis  
R. trench

(82) Diceratherium - mandible  
with milk teeth.  
Open carefully! see Dr. Howard  
Back trench





(83) Moropus (?) - portion of limb Bone  
Back trench.

(84) Dicrathesium - teeth  
All trenches.  
(including incisor)

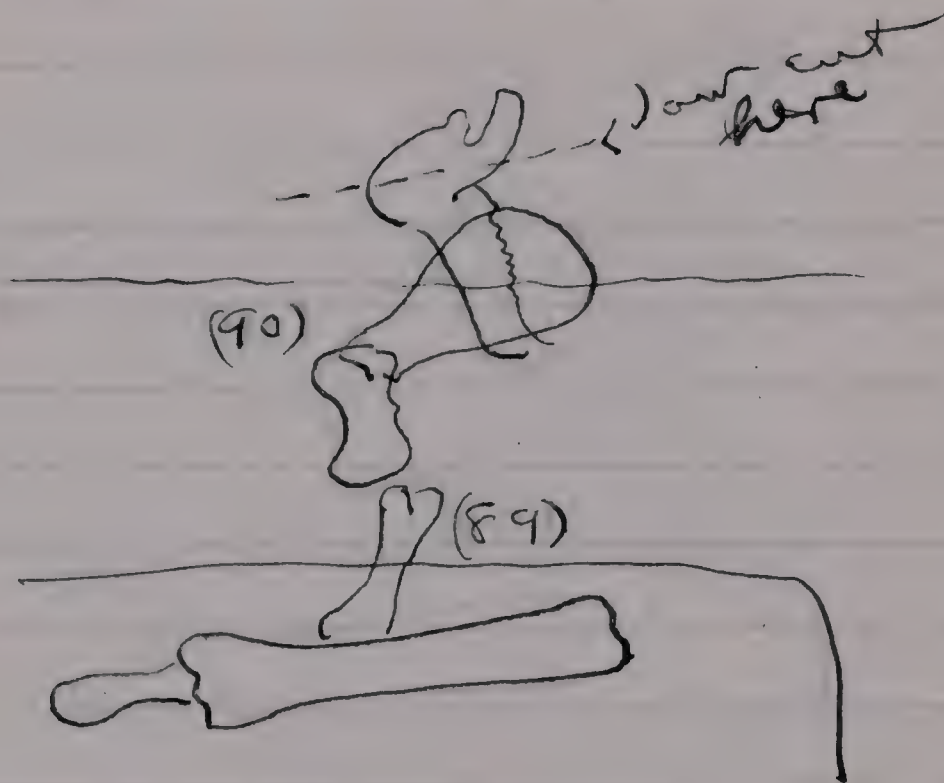
(85) Moropus - phalanges  
R. and L. trenches.

(86) Moropus - fragment of tooth  
L. trench.

(87) Canid - upper molar  
L. trench

(88) Small ulna  
Back trench.

(89) Dicrathesium - humerus  
Back trench - proximal end  
running beneath middle  
of Dinobius radius-ulna





(90) Dicrathium - atlas,  
scapula, mandible  
Back trench - extending  
from Dinohyus bone to  
wall

(91) Dinohyus - vertebra  
Back trench

(92) Dicrathium - tibia  
L. trench

(93) End of large rib  
Back trench corner of  
slab.

(Cut at edge of slab -  
proximal end in slab)

(94) Atlas.  
Bone trench, below  
Dinohyus radius-ulna  
(Cut at edge of  
slab - one wing  
still in slab)



(95) Dicrantherium - teeth  
all trench ch.

(96) Monopus - phalanges,  
including one ungual.  
all trench ch.

(97) Monopus - calcaneum  
Balli trench, near Dinobryus  
bone.

(98) (?)  
Back trench

(99) Monopus - lower tooth  
L. trench

(100) Monopus - upper and  
lower milk molars.  
also on in iron (this species?)  
L. trench.

(101) Monopus - phalanges  
All trench ch. (Mostly left)





(102) Dicranotum - tuft  
L. + Back from ch.

(103) Dicranotum - 3 vertebrae  
two articulated.  
L. trench.

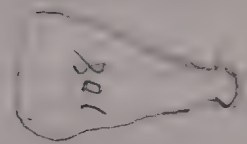
(104) Miscellaneous.  
L. trench.

(105) Mosses - lower water  
Back trench

Quarry face

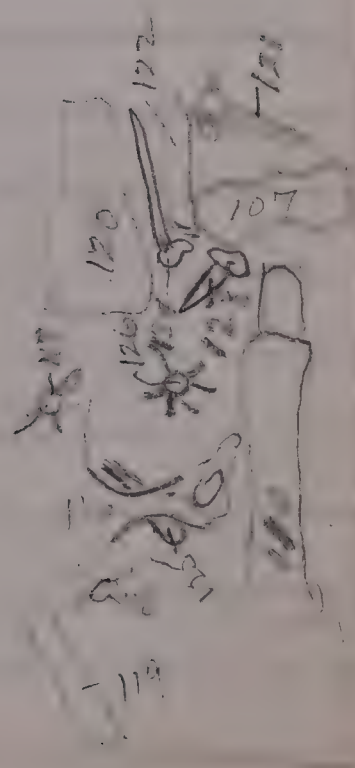
109

112



113

111





# Proprietors of the

107 2000

108 2000

109 2000

110 2000

111 2000

112

113 2000

114 2000

115 2000

116 2000

117 2000

118 Vert

119 Vert & Bone

120 Scapula

121 Vert

122 Vert

123 Vert

124 Vert.

125 Vert

126 Cervical Vert.

127 Cervical Vert

128 Vert. Cervical

129 Vert.

130 Vert.

131. *Myrica* *torreana*

132. *Thalassia* *testudinum*

133. *Utricularia*

134. *Rhizophora* *torreana*

135. *Humulus*







117036



